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Self-efficacy as a Predictor of Work Engagement among Teachers in Private Vocational High Schools

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Abstract: Active teacher engagement is a key determinant of both educational effectiveness and student learning outcomes, and this role has become especially prominent in vocational schools because of their unique instructional contexts. The objective of this research was to assess the level to which self-efficacy predicts work engagement among private vocational high school teachers in Surabaya. Specifically, it aims to quantify the relative contributions of the three self-efficacy dimensions (level, strength, and generality) to overall work engagement and to identify which dimension most strongly predicts work engagement in a vocational education context. The novelty of this research lies in applying a multidimensional self-efficacy framework using PLS-SEM to a large sample of Indonesian private vocational teachers, a population underrepresented in previous empirical studies. The findings are significant because they provide both theoretical insights for the academic community and practical implications for strengthening teachers' work engagement in vocational schools. This study utilized a quantitative research design, collecting data from 315 private vocational high school teachers. The dataset was then analyzed using Partial Least Squares Structural Equation Modeling. The results show that (Strength: $\beta = 0.764$; Level: $\beta = 0.763$; Generality: $\beta = 0.834$; $p < 0.05$) significantly impacts work engagement levels, with generality emerging as the strongest predictor, explaining 33.6% of engagement variance.



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These findings highlight the importance of fostering generalized confidence beliefs to enhance teacher engagement in vocational education contexts. By applying a multidimensional self-efficacy framework via PLS SEM among Indonesian teachers, this study offers both theoretical contributions and practical guidance for school leaders aiming to design targeted professional development interventions.

Keywords: self-efficacy, work engagement, teachers, vocational high schools, PLS-SEM.

自我效能感作为民办职业高中教师工作投入的预测因素

摘要：教师积极参与教学是决定教育效果和学生学习成果的关键因素。由于职业学校具有独特的教学环境，这一作用在职业教育中尤为突出。本研究旨在评估自我效能感在多大程度上预测泗水私立职业高中教师的工作投入。具体而言，本研究量化了自我效能感三个维度（水平、强度、普遍性）对整体工作投入的相对贡献，并识别出在职业教育背景下最能预测工作投入的维度。本研究的创新之处在于，将多维度自我效能感框架结合PLS-SEM方法，应用于印尼私立职业教师的大样本群体，这一群体在以往实证研究中较少被关注。研究结果具有重要意义，不仅为学术界提供理论见解，也为职业学校提升教师工作投入提供实践指导。本研究采用定量研究设计，收集了315名私立职业高中教师的数据，并通过偏最小二乘结构方程模型（PLS-SEM）进行分析。结果显示，三个自我效能感维度（强度： $\beta=0.764$ ；水平： $\beta=0.763$ ；普遍性： $\beta=0.834$ ； $p<0.05$ ）均显著影响工作投入水平，其中普遍性是最强预测因素；三者共同解释了33.6%的工作投入差异。这些发现强调了培养教师普遍性自信的重要性，以提升职业教育环境下的教师工作投入。通过在印尼教师群体中应用PLS-SEM多维度自我效能感框架，本研究为学校管理者设计有针对性的教师专业发展方案提供了理论依据和实践指导

关键词：自我效能感、工作投入、教师、职业高中、PLS-SEM

1. Introduction

Teachers play a complex role throughout their professional careers in education to provide quality learning and well-being to themselves and their students. This role includes educators, motivators, and facilitators in preparing the younger generation to face major challenges in the future [1], [2]. To keep their teaching strategies current and effective in the constantly changing educational environment, educators must likewise adjust to the times [3]. Therefore, to facilitate a better learning process that is pertinent to students' requirements in this digital age, it is crucial that teachers keep improving their competence and expertise.

As the teaching profession becomes more dynamic, work engagement has emerged as an essential condition for preserving instructional quality and ensuring teacher well-being [4], [5]. Teachers with high levels of work engagement not only show strong energy in carrying out

tasks, but are also able to maintain deep emotional commitment and focus, despite facing pressure [6], [7]. Research confirms that work engagement is positively correlated with teaching innovation and teacher retention; therefore, schools need to pay attention to factors that can increase this engagement [8], [9].

One of the most crucial psychological resources in the workplace is self-efficacy, which is the belief in one's ability to organize and execute the required tasks [10]. According to Bandura [11], self-efficacy affects how hard people try, how long they stick to something, and how motivated they are to reach their goals. High-self-efficacy teachers are more likely to be creative in their teaching strategies, open to receiving feedback, and emotionally resilient when faced with obstacles in the workplace [12].

2. Literature Review

2.1. Work Engagement

According to Bakker and Leiter [13], work engagement reflects positivity and high energy consumption during professional activities. It is commonly conceptualized in three dimensions: vigor, dedication, and absorption. Vigor denotes enthusiasm and stamina at work combined with resilience and readiness to exert more effort when needed. Dedication represents a sense of pride, inspiration, challenge, and enthusiasm for work. Absorption is a feeling of difficulty in detaching oneself from work, as if time passed quickly.

In the world of industry and education, several antecedents of work engagement include individual psychological state, leadership, work-related experience, organizational conditions, and patience [14], [15]. Specifically, self-efficacy was found to be an antecedent of work engagement [13], [16]. Within the educational context, teacher work engagement is defined as the extent of teachers' interest in and active participation in the learning process. Such engagement demonstrates how much teachers feel acknowledged and trusted, as well as their freedom to implement the teaching strategies they regard as the most appropriate. Teachers who are engaged in teaching play an important role in building students' interest in learning, and can be a representation of the subjects they teach. Therefore, teacher engagement significantly determines students' learning achievement [17].

2.2. Self Efficacy

Originating from Bandura's [11] social cognitive theory, self-efficacy denotes individuals' judgments about their ability to regulate and perform actions that lead to expected results. These judgments influence how motivated a person is, the energy that they devote, and their persistence under pressure. Bandura [11] further identified three dimensions of self-efficacy: level, generality, and strength.

Unlike the assessment of objective skills, self-efficacy reflects an individual's subjective perception or assessment of their own ability to deal with certain situations. This means that two people with the same skills can show very different performances contingent on their degree of self-efficacy.

As described by Bandura [11], self-efficacy is formed through the direct experience of success, observation of the success of others (modeling), verbal persuasion that provides confidence, and interpretation of the individual's physiological and emotional conditions when facing challenges. When individuals have consistent experiences of success, see others succeed, receive positive reinforcement, and feel emotionally calm, their self-efficacy tends to increase.

In the context of work, including in the teaching profession, self-efficacy functions as an important

psychological resource. High self-efficacy enables teachers to approach their professional responsibilities with greater confidence, particularly when confronted with demanding tasks, more resilience in overcoming learning obstacles, and better ability to adapt to change [18]. This condition ultimately encourages increased work engagement in terms of enthusiasm, dedication, and full involvement in daily teaching activities.

2.3. Hypothesis

There is currently very little empirical data examining the environment of private vocational high school instructors in Indonesia, despite earlier research confirming a favorable association between self-efficacy and work engagement across educational levels [19], [20]. Few studies have used the PLS-SEM approach to analyze the multidimensional contributions of self-efficacy, such as strength, level, and generality, on the elements of vigor, dedication, and absorption. Most studies have concentrated on elementary or general school instructors [21]. This highlights the pressing need for studies that investigate predictive pathways and variance gaps that the analysis model has not addressed, in addition to measuring the relationship between the two constructs.

This study aims to analyze the role of self-efficacy as a predictor of work engagement among private vocational high school teachers in Surabaya through the PLS-SEM approach. Specifically, this study focuses on analyzing the contribution of three dimensions of self-efficacy—strength, level, and generality—in forming the self-efficacy construct and measuring how much self-efficacy influences the three dimensions of work engagement: vigor, dedication, and absorption. Thus, this study aims to identify predictive mechanisms and variance gaps that remain unaddressed in models linking self-efficacy with work engagement in vocational education.

Hypothesis of the research:

H1: The strength dimension of self-efficacy contributes positively to the formation of the self-efficacy construct.

H2: The level dimension of self-efficacy contributes positively to the formation of the self-efficacy construct.

H3: The generality dimension of self-efficacy contributes positively to the formation of the self-efficacy construct.

H4: Self-efficacy positively influences vigor on teacher work engagement.

H5: Self-efficacy positively influences dedication on teacher work engagement.

H6: Self-efficacy positively influences absorption on teacher work engagement.

H7: Self-efficacy positively influences overall work engagement of private vocational high school teachers in Surabaya.

3. Materials and methods

3.1. Research Design

A quantitative research approach was adopted in this study using a survey method to obtain data from the relevant population directly in the field. This approach was chosen because it is considered the most appropriate for testing the relationship between latent variables that are psychological and complex, such as self-efficacy and work engagement in a structured and statistically based manner [22].

3.2. Population and Sample

The target population of this study consisted of teachers working in private vocational high schools in Surabaya City. This study used convenience sampling, producing a sample size of 345 teachers. Of the 345 teachers, 30 were involved in the instrument trial previously conducted to test the initial validity and understand the clarity of the questions listed in the questionnaire.

The inclusion criterion was teachers employed at private vocational high schools in Surabaya, regardless of their employment status as permanent teachers. Respondents were required to have at least one year of teaching experience and provide informed consent to participate in the survey. In this study, no exclusion criteria consisted of administrative staff or employees without teaching responsibilities. The sample in this research consisted of all teachers. These criteria ensured that the data were obtained from active teaching professionals who provided valid information relevant to the study objectives.

3.3. Population and Sample

The research instrument was developed by researchers based on [11]'s theory for the self-efficacy construct with three dimensions: level, generality, and strength, and [13]'s theory for the work engagement construct with three dimensions: vigor, dedication, and absorption. The questionnaire was distributed online via a special link prepared by the researcher. The questionnaire link was distributed to vocational high school teachers through a network of collaborations with the principal and teacher coordinator in each school.

The collected data were analyzed using the Partial Least Squares-based Structural Equation Modeling (PLS-SEM) technique conducted using SmartPLS software version 3.0. Within this research, the construct of self-efficacy consisted of 18 statement items reflecting three dimensions, whereas the work engagement construct consisted of 27 statement items reflecting three main dimensions. The analysis was carried out in stages starting from the evaluation of the outer model to assess the convergent validity, internal reliability, and discriminant validity of the construct and continued with the evaluation of the inner model to test the structural relationship between variables.

Bootstrapping was used to test the significance of the influence paths between the latent constructs studied [23].

4. Results

4.1. Respondent Profile Description

The description of the respondents' characteristics is intended to provide a comprehensive picture of the demographic background of the subjects involved in this study. The demographic data collected included information on gender, length of service, and marital status, which contributed to a more comprehensive understanding of the profile of private vocational school teachers in Surabaya.

The majority of participants in this study were women, accounting for 51.7%, while male teachers made up 48.3%. Regarding length of service, 46.0% of teachers had 1–10 years of teaching experience, followed by 31.4% who had worked for 11–20 years, 21.6% with 21–30 years, and 1.0% with more than 30 years of experience. In terms of marital status, most respondents were married (90.8%), whereas the remaining 9.2% were unmarried.

This composition indicates that the participants in this study had diverse demographic backgrounds, although they were predominantly experienced individuals, in terms of both teaching tenure and marital status.

4.2. Validity and Reliability Test

Validity and reliability tests were conducted using pre-survey data involving 30 respondents. The results of the validity test showed that out of a total of 18 items measuring the self-efficacy variable, six items had a corrected item-total correlation value below 0.3; thus, they were declared invalid and were not used in further analysis. After the invalid items were removed, the remaining 12 items had a correlation value above 0.3 and a Cronbach's alpha of 0.920, which indicated that the self-efficacy measurement instrument was valid and reliable [24]. The same procedure was applied to the work engagement variable, where out of the initial 27 items, nine did not meet the validity requirements because their item-total correlation value was below 0.3. By eliminating these items, 18 valid items were obtained, with a Cronbach's alpha of 0.875, which also indicated high reliability.

After the primary data were collected from 315 respondents, validity and reliability tests were conducted again on the items that had been filtered in the pre-survey stage. All 12 items in the self-efficacy variable had a corrected item-total correlation value above 0.3 and produced a Cronbach's alpha value of 0.883, which confirmed the validity and reliability of the instrument. Meanwhile, 18 items measuring work engagement also showed good validity, with adequate item-total correlation values and a Cronbach's alpha of

0.915. These results indicate that the instrument used in this study met the requirements of consistently and accurately measuring the constructs of self-efficacy and work engagement.

4.3. Description of Research Variables

The subsequent section provides a description of the research variables, which include the minimum, maximum, average (mean), and standard deviation of the total score values for each variable:

Table 1. Description of Research Variables

Variable	N	Min	Max	Mean	Std. Deviation
Self-Efficacy	315	30	59	48.98	6.236
Work Engagement	315	40	88	72.61	9.484

Developed by the authors

This study measured two main constructs, self-efficacy and work engagement, using the total score of a number of items on each scale. The total self-efficacy score ranged from 30 to 59, with an average value of 48.98 (SD = 6.236) from 315 respondents. This indicates that, in general, the findings show that teachers in private vocational high schools in Surabaya possess a high degree of self-efficacy. This is particularly evident in their ability to manage and execute professional tasks successfully.

Work engagement showed a similar tendency, with scores ranging from 40 to 88, with an average value of 72.61 (SD = 9.484). This value indicates that most teachers in this study were in the high work engagement category, which includes vigor, dedication, and absorption in carrying out their daily work. These descriptive findings generally support the theoretical assumption that teachers with stronger self-efficacy typically exhibit greater engagement in their work.

4.4. Partial Least Square Result

This study used Partial Least Squares structural equation modeling (PLS-SEM) to assess the effect of Self-Efficacy on Work Engagement in vocational high school teachers. The tool used was Smart PLS 3.0. Furthermore, in PLS-SEM analysis, attention is directed at assessing both the outer model (measurement model) and inner model (structural model).

Convergent validity test results using outer loading value. In this test, the resulting outer loading has a value greater than 0.5. This means that the indicators used were valid or could measure the variables in this study [25].

Convergent validity can also be evaluated using Average Variance Extracted (AVE). A construct is considered valid if the AVE exceeds, so the measurement of the indicator against the variable is valid [23].

Table 2. Average Variance Extracted (AVE)

Variable	Dimensions	AVE
Self-Efficacy	<i>Level</i>	0.547
	<i>Generality</i>	0.553
	<i>Strength</i>	0.582
Work Engagement	<i>Vigor</i>	0.508
	<i>Dedication</i>	0.537
	<i>Absorption</i>	0.515

Developed by the authors

Table 2 shows that AVE in each dimension has a value greater than 0.5. This shows that the indicators in the Level, Generality, and Strength dimensions are valid in measuring the Self-Efficacy variable. Likewise, the indicators in the Vigor, Dedication, and Absorption dimensions are said to be valid in measuring the Work Engagement variable.

The indicators used to measure each dimension in this study have demonstrated adequate discriminant validity, as each indicator shows the highest loading on the construct it is intended to measure [23]. Specifically, the dimensions of the self-efficacy variable Level, Generality, and Strength were accurately represented by four indicators. Similarly, the Work Engagement variable, comprising the dimensions of Vigor, Dedication, and Absorption, was appropriately captured through six indicators for each dimension.

Table 3. Reliability

Variable	Dimensions	Cronbach's Alpha	Composite Reliability
Self-Efficacy	<i>Level</i>	0.723	0.828
	<i>Generality</i>	0.729	0.831
	<i>Strength</i>	0.759	0.847
Work Engagement	<i>Vigor</i>	0.804	0.860
	<i>Dedication</i>	0.824	0.873
	<i>Absorption</i>	0.810	0.864

Developed by the authors

Table 3 shows the reliability values for each dimension of the Self-Efficacy and Work Engagement variables. As presented in the table, each construct demonstrates a Cronbach's alpha higher than 0.6, and the Composite Reliability produced is greater than 0.7, which indicates that the measurement of the Self-Efficacy and Work Engagement variables is reliable.

Table 4. R-Square and Q-Square

	R Square	SSO	SSE	Q ² (=1-SSE/SSO)
Level	0.763	1260.000	762.630	0.395
Generality	0.834	1260.000	713.615	0.434
Strength	0.764	1260.000	732.176	0.419
Vigor	0.791	1890.000	1175.552	0.378
Dedication	0.859	1890.000	1073.570	0.432
Absorption	0.750	1890.000	1218.108	0.355
Work Engagement	0.336	5670.000	4936.951	0.129

Developed by the authors

The R-square generated on the Level, Generality, and Strength dimensions had a value between 0.763-0.834. This shows that these dimensions can provide good measurements between 76.3% -83.4% to measure the self-efficacy variable. The dimension with the highest R-square was Generality, at 0.834. This shows that self-efficacy in vocational high school teachers is dominated by the dimension of generality. The R-Square values generated on the Vigor, Dedication, and Absorption dimensions were between 0.750-0.859. This shows that these dimensions can provide good measurements between 75% -85.9% to measure the Work Engagement variable. The dimension with the highest R-square was Dedication, at 0.859. This shows that Work Engagement in vocational high school teachers is dominated by the dimension of dedication. Meanwhile, the R-squared generated for the Work Engagement variable is 0.336. This shows that the self-efficacy variable has a contribution of 33.6% in influencing Work Engagement among vocational schoolteachers.

Table 4 also shows the measure of predictive relevance, namely, Q-Square. The Q-square generated for each dimension has a value above zero, which indicates that each dimension has a good ability to predict Self-Efficacy and Work Engagement. Specifically, the Q-Square generated for the Work Engagement variable of 0.129 (greater than zero) indicates that, in a structural context, self-efficacy is relevant in predicting Work Engagement.

Table 5. Description of Research Variables

	Original Sample (O)	T Statistics (O/STDEV)	P Values
Self-Efficacy -> Work Engagement	0.580	16.725	0.000

Developed by the authors

The coefficient value of the relationship between Self-Efficacy and Work Engagement was positive at 0.580. This shows a unidirectional relationship between Self-Efficacy and Work Engagement, where an increase in self-efficacy from vocational high school teachers

encourages an increase in Work Engagement. The t-statistic value was 16.725 (> 1.96). In addition, the p-value was < 0.05. These results indicate that self-efficacy has a significant effect on Work Engagement, so the hypothesis can be accepted.

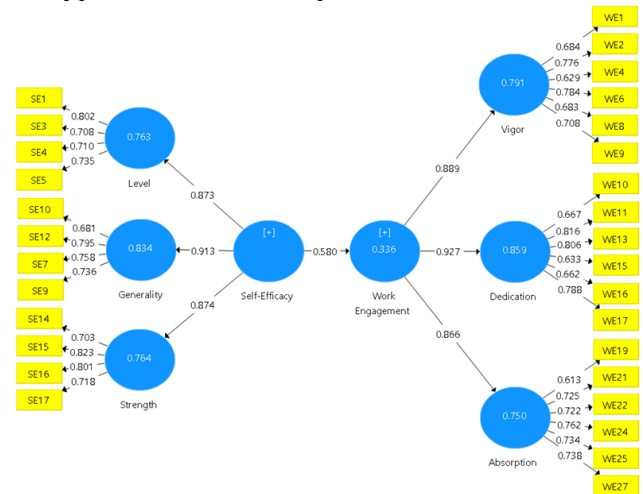


Figure 1. The Result of Structural Equation Model

Developed by the authors

The structural model in Figure 1 shows the relationship between the latent constructs of self-efficacy and work engagement, each of which comprises specific dimensions. The self-efficacy construct comprises three main dimensions: Level, Generality, and Strength, with path coefficients of 0.873, 0.913, and 0.874, respectively. The indicator loadings for each dimension ranged from 0.681 to 0.823 and the results provided evidence of adequate convergent validity.

Work engagement was formed by three dimensions: vigor (R² = 0.791), dedication (R² = 0.859), and absorption (R² = 0.750). Each dimension also had strong indicator loadings, ranging from 0.613 to 0.816. Structurally, self-efficacy was found to exert a positive effect on work engagement, with a path coefficient of 0.580 and an R² of 0.336, indicating that 33.6% of the variance in work engagement was accounted for by self-efficacy.

Furthermore, self-efficacy was strongly associated with each dimension of work engagement, with path coefficients of 0.889 for vigor, 0.927 for dedication, and 0.866 for absorption. This indicates that teacher self-efficacy substantially contributes to all dimensions of work engagement, particularly dedication, which demonstrates affective commitment and enthusiasm for carrying out tasks.

5. Discussion

This study revealed that the three dimensions of self-efficacy—strength, level, and generality—contribute significantly to the formation of the overall self-efficacy construct. The finding that self-efficacy significantly influences work engagement ($\beta = 0.580$; $R^2 = 0.336$) is

consistent with prior studies that posited self-efficacy as an important antecedent of work engagement. For example, [26] found that self-efficacy and professional support significantly predicted work engagement among early childhood teachers, with their model explaining 55% of the variance, although the study did not differentiate between self-efficacy dimensions. Similarly, [27] demonstrated that self-efficacy, along with reflection and resilience, was the primary direct factor predicting work engagement among Chinese English teachers ($\beta = 0.52$; $R^2 = 0.27$). Our findings align with [26] and [27] in confirming the central role of self-efficacy, but extend the literature by identifying which specific dimension, generality, most strongly predicts work engagement. This provides a more nuanced understanding of how self-efficacy operates across educational contexts, highlighting the theoretical contributions and practical implications of a multidimensional approach.

The dominance of the dedication dimension in the work engagement construct, as reflected in the highest R^2 value (0.859), indicates that the work engagement of private vocational high school teachers in Surabaya was strongly driven by aspects of emotional commitment to work. This reflects that teachers not only carry out their duties mechanically but also have high enthusiasm, pride, and meaning in their profession. In the context of vocational education oriented towards real results, dedication is the main foundation that maintains the sustainability and quality of the teacher's role. The dedication dimension being the highest dimension is also aligned with the results reported by Al-Hamdan and Bani Issa [28], which have been conducted on nurses in government, university, and private hospitals spread across various regions of northern and central Jordan. This suggests that work that requires direct human involvement requires a high level of dedication as the main support for intrinsic motivation and professional resilience.

Furthermore, the strength of the generality dimension in the measurement model ($\beta = 0.834$) strengthens Bandura [11]'s premise that a person's belief in their abilities across contexts influences motivation and action. Teachers with self-efficacy that can be generalized across work contexts will be more willing to take the initiative, more resilient to failure, and more motivated to be actively involved in their work, which ultimately increases work engagement [29], [30]. The strong generality dimension also suggests that private vocational high school teachers in Surabaya may face diverse role demands, so flexible self-confidence is key to dealing with work dynamics in a vocational education environment.

Although self-efficacy's contribution to work engagement is significant, the R^2 value of 0.336 also indicates that there are other variables that have not been included in the model that may influence work

engagement. This opens up opportunities for further research by considering contextual factors, such as leadership, organizational climate, and workload [31], [32], [33]. In addition to contextual factors, other psychological variables such as psychological capital, emotional intelligence, and job crafting can be incorporated into future models to achieve a deeper understanding of the determinants of work engagement among vocational high school teachers. Longitudinal research is also recommended to examine the dynamics of changes in the development of work engagement over time and changes in education policies.

Theoretically, these findings can be understood through the Job Demands-Resources Model framework [34], which shows that self-efficacy serves as a personal resource that intervenes in the relationship between job demands and work engagement. High self-efficacy enables teachers to handle work pressure and task complexity more effectively, resulting in stronger levels of dedication and vigor. This viewpoint further reinforces the notion that work engagement is shaped not solely by external conditions but is also largely determined by personal resources that are psychological in nature. Therefore, developing personal resources, such as self-efficacy, is a strategic element in strengthening teachers' psychological resilience in a dynamic educational environment.

In terms of methodology, the use of PLS-SEM has proven effective in handling complex and multidimensional models, as in this study. This method has proven to be appropriate because it can handle hierarchical constructs, as well as reflective and formative structures simultaneously. In addition to strengthening the validity of the theory and interpretation of findings, PLS-SEM offers greater flexibility than conventional SEM, especially under conditions of non-normally distributed data or medium sample sizes [35]. Therefore, this method not only provides statistical reliability, but also a deeper understanding of the latent relationships between complex constructs, as shown in the interaction between self-efficacy dimensions and work engagement in this study.

From a practical perspective, the findings suggest that strengthening teachers' generality of self-efficacy may be particularly effective in fostering higher work engagement, especially in vocational education settings, where adaptability is essential. School principals and policymakers can use these insights to design professional development programs that enhance teachers' confidence in managing diverse challenges. From a theoretical standpoint, this research contributes by refining the multidimensional view of self-efficacy and demonstrating its differential effects on engagement dimensions, offering a more nuanced basis for future research on teacher motivation and occupational well-being.

6. Conclusion

The current investigation demonstrates that the construct of self-efficacy is significantly shaped by three dimensions of self-efficacy: generality, strength, and level. Self-efficacy itself influenced the work engagement of private vocational high school teachers in Surabaya ($\beta=0.580$; $R^2=0.336$). The strongest contributors to each construct are generality and dedication. Practically, these results encourage educational institutions and policymakers to design professional development programs that improve teachers' technical proficiency while also increasing their generality, capacity to manage a range of work-related situations, and emotional commitment (dedication). For example, training modules based on successful experiences (mastery experiences), peer modeling, and mentorship can be included in the agenda to improve teacher quality.

However, the present study acknowledges certain limitations, one of which is the use of a convenience sample from one city, which reduces the generalizability of the findings, and the cross-sectional design that hinders causal inference. Therefore, future studies should adopt a longitudinal design to capture the dynamics of self-efficacy and engagement over time and expand the variables by including organizational factors (e.g., leadership and school climate) or other psychological resources (e.g., psychological capital, emotional intelligence, and job crafting). The use of mediating variables can explain how the independent variable is linked to the dependent variable. A mixed-methods approach can also be used to explore the mechanisms by which self-efficacy contributes to work engagement in various vocational education contexts.

Academically, this study advances the literature by applying a multidimensional conceptualization of teacher self-efficacy in a vocational education context and demonstrating its distinct influence on work engagement dimensions. Unlike most prior research, which has treated self-efficacy as a single construct, our findings reveal that generality and dedication play dominant roles. This originality enriches theoretical models and provides a novel foundation for scholars to further investigate how specific self-efficacy subdimensions shape work engagement across diverse educational settings, such as kindergartens, elementary schools, and junior high schools.

Declarations

Author Contributions

Conceptualization, U.A.I.; methodology, U.A.I. and W.H.; formal analysis, U.A.I. and W.H.; validation, M.G.; investigation, Z.F. and P.D.P.S.; resources, M.G.; data curation, N.A.H., Z.F., and P.D.P.S.; writing, original draft preparation, U.A.I.; writing, review, and editing, W.H. and N.A.H.; visualization, N.A.H., Z.F.,

and P.D.P.S.; supervision, U.A.I., W.H., and M.G.; project administration, U.A.I.; funding acquisition, U.A.I. All authors have read and agreed to the published version of the manuscript.

Data Availability Statement

Data sharing not applicable to this article.

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Conflicts of Interest

There is no conflict of interests regarding the publication of this manuscript.

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